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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRIAN E. DALTON

Appeal 2009-005706
Application 10/642,976
Technology Center 3700

Decided: January 19, 2010

Before TONI R. SCHEINER, JEFFREY N. FREDMAN, and
STEPHEN WALSH, *Administrative Patent Judges*.

WALSH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) (2002) from a final rejection of claims 1-18. We have jurisdiction under 35 U.S.C. § 6(b) (2002). We reverse.

STATEMENT OF THE CASE

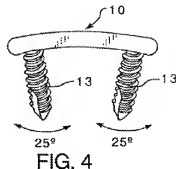
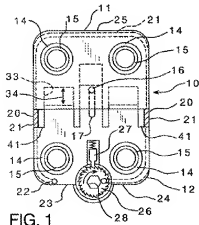
The claims are directed to a cervical compression plate assembly that is used to assist the bone grafting process. (Spec. 6: 1-12). The assembly is secured to adjacent vertebra and provides continuous compressive loading on bone graft material deposited between the vertebral elements after removal of a vertebral disc. (*Id.*).

Claims 1 and 10 are the only independent claims in the application. Exemplary claim 1 reads as follows:

1. A cervical compression plate assembly having screw receiving elements at opposite ends thereof configured for engaging bone fixation screws extending from respective vertebral elements, means for permitting the distance between said screw receiving elements at opposite ends to be shortened but preventing said distance from increasing;
the improvement comprising compression spring means housed in said assembly and configured for continuously urging said screw receiving elements at opposite ends together for thereby providing continuous compressive loading on bone graft material disposed between the vertebral elements.

(App. Br. 13, Claims App'x.)(Additional indentation added.
See 37 C.F.R. §1.75(i)).

Figures 1 and 4 from the application, reproduced below, illustrate one embodiment of the claimed cervical compression plate assembly. (Spec.10: 5-14).



{Fig. 1 illustrates the cervical compression plate assembly of the invention and Fig. 4 illustrates a bottom or top view of the coronal curve allowing the plate assembly to fit with the contour of the cervical spine. (*Id.*).}

THE EVIDENCE

The Examiner relies upon the following as evidence in support of the rejections:

Beer	5,458,642	Oct. 17, 1995
Serbousek	6,066,142	May 23, 2000
Richelsoph	6,695,846 B2	Feb. 24, 2004
Sevrain	7,008,427	Mar. 07, 2006

THE REJECTIONS

The following rejections are before us for review:

1. Claims 1-2, 5-6, 8, 10-11, 14-15 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Beer.
2. Claims 1-2, 5-6, 8, 10-11, 14-15 and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Sevrain.
3. Claims 3-4 and 12-13 stand rejected under 35 U.S.C. § 103(a) over the combination of Sevrain and Richelsoph.
4. Claims 7 and 16 stand rejected under 35 U.S.C. § 103(a) over the combination of Sevrain and Serbousek.

We REVERSE.

ISSUES

Has Appellant established that the Examiner erred in determining that the prior art anticipates a cervical compression plate assembly comprising compression spring means configured for continuously urging said screw receiving elements at the opposite ends together for thereby providing

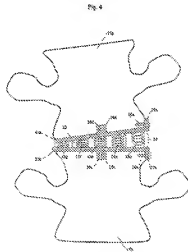
continuous compressive loading on bone graft material disposed between the vertebrae?

Has Appellant established that the Examiner erred in determining that dependent claims 3, 4, 7, 12, 13 and 16 would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the combined prior art?

FINDINGS OF FACT

1. Beer described a synthetic intervertebral disc comprising disc-shaped plates 11a and 11b joined by springs along the inside of the outer perimeter. (Beer, Abstract).

2. Beer Fig. 4 is reproduced below:



{Fig. 4 illustrates a front view of the synthetic intervertebral disc of Beer's invention. (*Id.* at 3:41-43).}

3. Beer taught that the device is fit between the concave surfaces of two vertebrae. (*Id.* Abstract).

4. Beer taught that the device has a spring means 13 comprising a plurality of springs 13a-13i with each spring attached to the upper plate and lower plate. (*Id.* at 4:30-34).

5. Beer taught that “[t]he spring system distributes forces acting on the disc between the springs and allows normal movement of the vertebrae during flexion and extension of the spine in any direction.” (*Id.* Abstract.)

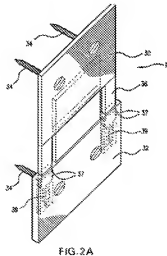
6. Additionally, Beer taught that during movement, “while some of the springs 13h and 13f are in compression, others 13d and 13c are in expansion, thus allowing the [synthetic] disc to mimic the operation of a natural disc that has been replaced.” (*Id.* at 5:12-17).

7. Beer did not describe using the synthetic disc in conjunction with bone graft material.

8. Beer did not disclose that the springs of the synthetic disc are configured to provide continuous compressive loading on bone graft material disposed between the vertebral elements.

9. Sevrain described an inter-vertebral disc prosthesis comprising upper and lower plates 30 and 32 adapted to be mounted with screws 34 to adjacent upper and lower vertebrae. (Sevrain at 6:23-27.)

10. Sevrain Fig. 2A is reproduced below:



{Fig. 2A illustrates a perspective view of the disc prosthesis of Sevrain’s invention. (*Id.* at 4:60-61).}

11. Sevrain taught that the disc prosthesis provides “stability by connecting the two adjacent vertebrae, allows for some relative movements therebetween, e.g., flexion and extension, and [provides] for damping when subjected to axial loads.” (*Id.* at 5:28-32).

12. Sevrain taught: “More than one spring may be used for maintaining, at rest, the joint 16 in an intermediate position, i.e., in a ‘floating’ position such that the joint 16 is capable of opening or closing, with the spring forces always bringing it back to its at rest position.” (*Id.* at 5:60-65).

13. Sevrain did not disclose that the springs of the disc prosthesis are configured to provide continuous compressive loading on bone graft material disposed between the vertebral elements.

PRINCIPLES OF LAW

To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently. Anticipation is an issue of fact, and the question whether a claim limitation is inherent in a prior art reference is a factual issue.

In re Schreiber, 128 F.3d 1473, 1477 (Fed. Cir. 1997) (citations omitted).

[C]hoosing to define an element functionally, *i.e.*, by what it does, carries with it a risk. As our predecessor court stated in [*In re*] *Swinehart*, 439 F.2d [210,] 213 [CCPA 1971]:

where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to

be in the prior art does not possess the characteristic relied on.

Id. at 1478.

ANALYSIS

I. The Anticipation Rejections.

A. *Beer*

The Examiner found that Beer described a spinal assembly having plates with screw-receiving elements at opposite ends configured for engaging bone fixation screws extending from respective vertebral elements. (Fin. Rej. 2 dated Sep. 7, 2007,). The Examiner also found that Beer described a means for permitting the distance between the elements at the ends to be shortened, *i.e.*, springs 13c-13g, wherein the springs are capable of providing a continuous compression because they are attached to the plates. (*Id.* at 2-3)(citing Beer 4:31-35). According to the Examiner, Beer's assembly was capable of providing loading on graft material disposed between the vertebral elements. (*Id.* at 3). The Examiner also found that Beer's core/border 14 was capable of preventing the distance of the assembly from increasing. (*Id.*).

Appellant challenges the Examiner's rejection by asserting that Beer did not disclose an assembly capable of "loading on graph material (12) disposed between adjacent vertebral elements." (App. Br. 12). Rather, Beer described a prosthesis element that was "designed only to absorb compression and provide cushioning between adjacent vertebra in substitution of the removed disc." (*Id.*) Further, Beer's "device does not even provide space for inserting a bone graph between his upper and lower plates 11a and 11b or between adjacent vertebra." (*Id.* at 13).

We agree with Appellant that the Examiner failed to establish that Beer described an assembly with spring means configured for urging the opposite ends of the assembly together. Instead, Beer's assembly "distributes forces . . . during flexion and extension of the spine in any direction." (Beer, Abstract). While Beer described some non-continuous conditions where some of the springs were in compression (which would urge the assembly ends apart, not together), Beer explained that other springs were in expansion (but not necessarily in continuous tension), so as to mimic the operation of the natural disc that has been replaced. (Beer, 5:12-17). *See e.g.*, Beer Fig. 4, which does not show a spring configured for continuously urging the opposite ends of the assembly together, or for continuous compression on graft material between the vertebral elements. Beer did not explicitly describe Appellant's assembly. The evidence does not support the Examiner's finding that Beer's assembly inherently possessed the functionally defined limitations of Appellant's assembly. *Cf. Schreiber*, 128 F.3d at 1478.

B. *Sevrain*

The Examiner found that Sevrain described a plate assembly having at least two plates with screw-receiving elements and a tension spring 39 capable of holding the plates in a compressed position. (Fin. Rej. 3)(citing Sevrain Fig. 2A and 5:60-65). According to the Examiner, spring 39 was capable of shortening "the distance between the two portions." (*Id.*).

Appellant challenges the Examiner's rejection by asserting that Sevrain did not disclose that tension spring 39 is capable of holding the plate in a compressed position. (App. Br. 15). According to Appellant, Sevrain

“merely describ[ed] a prosthetic device for providing a cushioning between adjacent vertebra in substitution of the original cushioning of the natural disc which has been removed.” (*Id.*). Appellant argues that the springs in Sevrain “provide a ‘floating’ so that the spring forces always bring it back to its at rest position.” (*Id.*).

We agree with Appellant. The portion of Sevrain specifically relied upon by the Examiner does not support the rejection. (*See* Fin. Rej. 3)(citing Sevrain 5:60-64). Specifically, Sevrain states, “More than one spring may be used for *maintaining, at rest*, the joint 16 in an intermediate position, i.e., in a ‘floating’ position such that the joint 16 is capable of opening or closing, with *the spring forces always bringing it back to its at rest position.*” (FF12)(emphasis added). The evidence does not support the Examiner’s finding that Sevrain’s assembly provided “continuous compressive loading.” *Cf. Schreiber*, 128 F.3d at 1478.

II. The Obviousness Rejections.

Principles of Law

When determining whether a claim is obvious, an Examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995).

Analysis

Appellant argues that the Examiner misapplied the teachings of Sevrain in the same manner as in the anticipation rejections.

We agree. The evidence does not support the Examiner's finding that Sevrain described each and every element set forth in claims 1 and 10. The obviousness rejections do not explain how the prior art suggests an assembly configured to apply "continuous compressive loading."

CONCLUSION

On the record before us, Appellant has shown error on the part of the Examiner. The prior art did not describe each limitation of the claimed invention, and the Examiner did not establish that an assembly having all the limitations of the claims would have been obvious to one of ordinary skill in the art at the time the invention was made.

DECISION

1. The rejection of claims 1-2, 5-6, 8, 10-11, 14-15 and under 35 U.S.C. § 102(b) as being anticipated by Beer is REVERSED.
2. The rejection of claims 1-2, 5-6, 8, 10-11, 14-15 and 17 under 35 U.S.C. § 102(e) as being anticipated by Sevrain is REVERSED.
3. The rejection of claims 3-4 and 12-13 under 35 U.S.C. § 103(a) over the combination of Sevrain and Richelsoph is REVERSED.
4. The rejection of claims 7 and 16 under 35 U.S.C. § 103(a) over the combination of Sevrain and Serbousek is REVERSED.

REVERSED

Appeal 2009-5706
Application 10/642,976

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